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AMENDMENTS TO THE CLAIMS

1. (Currently amended) An assay for detecting and identifying one or more micro-organisms in a sample, ~~characterized in that~~wherein said assay comprises ~~the used~~detecting the presence or absence of at least two conserved molecular markers in the sample, thereby identifying one or more microorganisms.
2. (Currently amended) ~~Assay~~The assay according to claim 1, ~~characterized in that~~wherein said micro-organisms are bacteria.
3. (Currently amended) ~~Assay~~The assay according to ~~claims 1 or 2~~claim 1, ~~characterized in that~~wherein said assay comprises ~~the used~~detecting the presence or absence of at least one molecular marker that is conserved in Gram-positive bacteria and at least one molecular marker that is conserved in Gram-negative bacteria.
4. (Currently amended) ~~Assay~~The assay according to ~~any of claims 1 to 3~~claim 3, ~~characterized in that~~wherein said molecular marker that is conserved in Gram-positive bacteria is selected from the group ~~comprising the~~consisting of Spy0160, Spy1372, SpyM3_0902 and SpyM3_0903, and Spy1527 sequences.
5. (Currently amended) ~~Assay~~The assay according to ~~any of claims 1 to 3~~claim 3, ~~characterized in that~~wherein said molecular maker that is conserved in Gram-positive bacteria is selected from the group ~~comprising the sequences with~~consisting of SEQ ID NOs 1-62, 64-107, 109-111, 117-129, 137, 145-148, 150-193, 233-237, 240-241, 255, 326-395, 397-399, and 404-425.
6. (Currently amended) ~~Assay~~The assay according to ~~any of claims 1 to 3~~claim 3, ~~characterized in that~~wherein said molecular maker that is conserved in Gram-negative bacteria is selected from the group ~~comprising the~~consisting of Ecs0036, HI1576, EG10839 and EG11396, and HI0019 sequences.

7. (Currently amended) ~~Assay~~ The assay according to ~~any of claims 1 to 3~~ claim 3, ~~characterized in that~~ wherein said molecular marker that is conserved in Gram-negative bacteria is selected from the group ~~comprising the sequences with~~ consisting of SEQ ID NOs 63, 108, 112-116, 130-136, 138-144, 194-232, 238-239, 242-254, 256-325, 396, 400-403, and 426-461.
8. (Currently amended) ~~Use of an assay according to any of claims 1 to 7~~ A method for diagnosing bacterial infection of a sample comprising screening the sample for the presence of at least two conserved molecular markers.
9. (Currently amended) A primer pair for use in the assay of claim 1, suitable for amplifying a molecular marker that is conserved in Gram-positive bacteria and is selected from the group consisting of Spy0160, Spy1372, SpyM3_0902, SpyM3_0903, and Spy1527 sequences; or is selected from the group consisting of SEQ ID NOs 1-62, 64-107, 109-111, 117-129, 137, 145-148, 150-193, 233-237, 240-241, 255, 326-395, 397-399, and 404-425 ~~as defined in claims 4 or 5.~~
10. (Currently amended) A primer pair for use in the assay of claim 1, suitable for amplifying a molecular marker that is conserved in Gram-negative bacteria and is selected from the group consisting of the Ecs0036, HI1576, EG10839, EG11396, and HI0019 sequences; or is selected from the group consisting of SEQ ID NOs 63, 108, 112-116, 130-136, 138-144, 194-232, 238-239, 242-254, 256-325, 396, 400-403, and 426-461 ~~as defined in any of claims 6 or 7.~~
11. (Currently amended) A nucleic acid probe for use in the assay of claim 1, capable of hybridizing to a molecular marker that is conserved in Gram-positive bacteria and is selected from the group consisting of Spy0160, Spy1372, SpyM3_0902, SpyM3_0903, and Spy1527 sequences; or is selected from the group consisting of SEQ ID NOs 1-62, 64-107, 109-111, 117-129, 137, 145-148, 150-193, 233-237, 240-241, 255, 326-395, 397-399, and 404-425 ~~as defined in claims 4 or 5.~~

12. (Currently amended) A nucleic acid probe for use in the assay of claim 1, capable of hybridizing to a molecular marker that is conserved in Gram-negative bacteria and is selected from the group consisting of Ecs0036, HI1576, EG10839, EG11396, and HI0019 sequences; or is selected from the group consisting of SEQ ID NOs 63, 108, 112-116, 130-136, 138-144, 194-232, 238-239, 242-254, 256-325, 396, 400-403, and 426-461 as defined in ~~claims 6 or 7~~.

13. (Currently amended) A composition for use in the assay of claim 1, comprising:

(i) at least one primer pair suitable for amplifying a molecular marker that is conserved in Gram-positive bacteria and is selected from the group consisting of Spy0160, Spy1372, SpyM3 0902, SpyM3 0903, and Spy1527 sequences; or is selected from the group consisting of SEQ ID NOs 1-62, 64-107, 109-111, 117-129, 137, 145-148, 150-193, 233-237, 240-241, 255, 326-395, 397-399, and 404-425 as defined in ~~claims 4 or 5~~, and

(ii) at least one primer pair suitable for amplifying a molecular marker that is conserved in Gram-negative bacteria and is selected from the group consisting of Ecs0036, HI1576, EG10839 and EG11396, and HI0019 sequences; or is selected from the group consisting of SEQ ID NOs 63, 108, 112-116, 130-136, 138-144, 194-232, 238-239, 242-254, 256-325, 396, 400-403, and 426-461 as defined in ~~claims 6 or 7~~.

14. (Currently amended) A composition for use in the assay of claim 1, comprising:

(i) at least one nucleic acid probe capable of hybridizing to a molecular marker that is conserved in Gram-positive bacteria and is selected from the group consisting of Spy0160, Spy1372, SpyM3 0902, SpyM3 0903, and Spy1527 sequences; or is selected from the group consisting of SEQ ID NOs 1-62, 64-107, 109-111, 117-129, 137, 145-148, 150-193, 233-237, 240-241, 255, 326-395, 397-399, and 404-425, as defined in ~~claims 4 or 5~~ and

(ii) at least one nucleic acid probe capable of hybridizing to a molecular marker that is conserved in Gram-negative bacteria and is selected from the group consisting of

Ecs0036, HI1576, EG10839, EG11396, and HI0019 sequences; or is selected from the group consisting of SEQ ID NOs 63, 108, 112-116, 130-136, 138-144, 194-232, 238-239, 242-254, 256-325, 396, 400-403, and 426-461 as defined in claims 6 or 7.

15. (Currently amended) A kit for detecting and identifying one or more micro-organisms, preferably bacteria, in a sample, which comprises a composition according to claim 13 and/or claim 14.
16. (Currently amended) A DNA chip for use in the assay of claim 1, in which comprising:
- (i) at least one nucleic acid probe capable of hybridizing to a molecular marker that is conserved in Gram-positive bacteria and is selected from the group consisting of Spy0160, Spy1372, SpyM3_0902, SpyM3_0903, and Spy1527 sequences; or is selected from the group consisting of SEQ ID NOs 1-62, 64-107, 109-111, 117-129, 137, 145-148, 150-193, 233-237, 240-241, 255, 326-395, 397-399, and 404-425 as defined in claims 4 or 5, and
 - (ii) at least one nucleic acid probe capable of hybridizing to a molecular marker that is conserved in Gram-negative bacteria and is selected from the group consisting of the Ecs0036, HI1576, EG10839, EG11396, and HI0019 sequences; or is selected from the group consisting of SEQ ID NOs 63, 108, 112-116, 130-136, 138-144, 194-232, 238-239, 242-254, 256-325, 396, 400-403, and 426-461 as defined in claims 6 or 7, is,
wherein the probes are immobilized on a solid support.
17. (New) A kit for detecting and identifying one or more micro-organisms in a sample, which comprises a composition according to claim 14.
18. (New) The kit according to claim 15, wherein the micro-organisms are bacteria.
19. (New) The kit according to claim 17, wherein the micro-organisms are bacteria.